INFORMATION DISCLOSURE CITATION

PTO-1449

ATTY. DOCKET NO.	SERIAL NO.
A-67465//RFT/RMS/RMK	09/295,691
APPLICANT: KAYYEM, J.	
FILING DATE: April 21, 1999	GROUP: ~~1744~~ 1743

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
JSS	1	4,707,352	11/17/87	Stavrianopoulos	424	1.17	
JSS	2	4,707,440	11/1987	Stavrianopoulos	435	6	
JSS	3	4,711,955	12/8/87	Ward et al.	536	25.32	
JSS	4	4,755,458	7/5/88	Rabbani et al.	435	5	
JSS	5	4,849,513	7/18/89	Smith et al.	536	~~27~~ 26.6	
JSS	6	4,868,103	9/19/89	Stavrianopoulos et al.	435	5	
JSS	7	4,894,325	1/16/90	Englehardt et al.	435	6	
JSS	8	4,943,523	7/24/90	Stavrianopoulos	435	7.5	
JSS	9	4,952,685	8/28/90	Stavrianopoulos	536	25, 32	
JSS	10	4,994,373	2/19/91	Stavrianopoulos	435	6	
JSS	11	5,002,885	3/26/91	Stavrianopoulos	435	188	
JSS	12	5,013,831	5/7/91	Stavrianopoulos	536	25.32	

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation Yes	Translation No
JSS	13	0 063879	11/3/82	Europe				
JSS	14	92/10757	6/25/92	PCT (WO)				
JSS	15	0 234938	2/26/87	EP (A2)				
JSS	16	93/10267	PCT (WO)					

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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JOHN S. STARSIAK	26 OCTOBER 2000

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APPLICANT KAYYEM, J.	
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U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	17	5,082,830	1/21/92	Brakel et al.	435	6	
	18	5,175,269	12/29/92	Stavrianopoulos	536	26.13	
	19	5,241,060	8/31/93	Englehardt et al.	536	25.32	
	20	5,278,043	1/11/95	Bannwarth et al.	536	23.1	
	21	5,312,527	5/17/94	Mikkelsen et al.	204	~~153.12~~ 777.5	
	22	5,328,824	7/12/94	Ward et al.	435	6	
	23	5,449,767	9/12/95	Ward et al.	536	24.3	
	24	5,472,881	12/95	Beebe et al.	436	94	
	25	5,476,928	12/19/95	Ward et al.	536	24.3	
	26	5,595,908	1/21/97	Fawcett et al.	~~534~~ 435	~~11~~ 28 1.2	
	27	5,565,552	10/15/96	Magda et al.	534	11	
	28	5,573,906	11/12/96	Bannwarth et al.	435	6	
	29	5,591,578	1/7/97	Meade et al.	435	6	
	30	5,601,982	2/1997	Sargent et al.	435	6	

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation Yes	Translation No
	31	2 090904	9/24/93	CANADA				
	32	0 599337	1/16/94	EPO				
	33	238,166	1988	JP (Abstract (63-238166))				
	34	0 229943	7/29/87	EP				
	35	96/40712	12/19/96	WO				

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	36	4,840,893	6/20/89	Hill et al.	435	6	
	37	5,403,451	4/4/95	Riviello et al.	~~204~~ 205	~~153.1~~ 777.5	
	38	5,620,850	4/15/97	Bamdad et al.	530	300	
	39	5,780,234	7/14/98	Meade et al.	435	6	
	40	5,770,369	6/23/98	Meade et al.	435	6	
	41	5,705,348	1/6/98	Meade et al.	435	6	
	42	5,824,473	10/1998	Meade et al.	435	6	

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation Yes	Translation No
	43	0515615	9/4/96	EP (UK)				
	44	97/01646	1/16/97	WO				
	45	93/23425	11/25/93	WO				
	46	90/05732	5/31/90	WO				
	~~47~~	~~6-41183~~	~~2/15/94~~	~~JP~~				X
	48	93/22678	11/1993	PCT				
	49	97/44651	11/1997	PCT				
	50	98/35232	8/1998	PCT				

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	51	5,776,672	7/1998	Hashimoto et al.	435	6	
	52	5,952,172	9/1999	Meade et al.	435	6	
	53	5,552,270	9/1996	Khrapko et al.	435	6	
	54	5,770,721	6/1998	Ershov et al.	536	25.3	
	55	5,851,772	12/1998	Mirzabekov et	435	6	
	56	5,756,050	5/1998	Ershov et al.	422	100	
	57	5,741,700	4/1998	Ershov et al.	435	287.1	

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation Yes	Translation No
	58	95/15971	6/1995	PCT				
	~~59~~	~~94/22889~~	~~10/1994~~	~~PCT~~				X
	60	98/20162	5/1998	PCT				
	61	99/14596	3/1999	PCT				
	62	99/67425	12/1999	PCT				
	63	98/28444	7/1998	PCT				
	64	98/27229	6/1998	PCT				
	65	97/27329	7/1997	PCT				

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EXAMINER'S INITIALS		PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	66	5,587,128	12/1996	Wilding et al.	422	50	
	67	5,498,392	3/1996	Wilding et al.	422	68.1	
	68	5,643,738	7/1997	Zanzucchi et al.	435	6	
	69	5,750,015	5/1998	Soane et al.	204	454	
	70	5,726,026	3/1998	Wilding et al.	435	7.21	
	71	5,635,358	6/1997	Wilding et al.	435	7.2	
	72	5,126,022	6/1992	Soane et al.	204	458	
	73	5,304,487	4/1994	Wilding et al.	435	29	
	74	5,071,531	12/1991	Soane	204	616	
	75	5,061,336	10/1991	Soane	156	245	
	76	5,747,169	5/1998	Fan et al.	428	426	
	77	5,296,375	3/1994	Kricka et al.	435	2	

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EXAMINER'S INITIALS		PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation Yes	Translation No
	78	0 637 998	7/1996	EP				
	79	0 637 996	7/1997	EP				
	80	96/39260	12/1996	PCT				
	81	97/16835	5/1997	PCT				
	82	98/13683	4/1998	PCT				
	83	97/16561	5/1997	PCT				

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	84	5,110,745	5/1992	Kricka et al.	436	87	
	85	5,569,364	10/1996	Hooper et al.	204	455	
	86	5,135,627	8/1992	Soane	204	455	
	87	5,632,876	5/1997	Zanzucchi et al.	204	600	
	88	5,593,838	1/1997	Zanzucchi et al.	435	6	
	89	5,585,069	12/1996	Zanzucchi et al.	422	100	
	90	5,637,469	6/1997	Wilding et al.	435	7.21	
	91	5,486,335	1/1996	Wilding et al.	422	55	
	92	5,770,029	6/1998	Nelson et al.	204	604	
	93	5,631,337	5/1997	Sassi et al.	526	307.2	
	94	4,822,746	4/1989	Walt	436	528	
	95	5,114,864	5/1992	Walt	436	528	

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation Yes	Translation No
	96	97/43629	11/1997	PCT				
	97	96/39252	12/1996	PCT				
	98	96/15576	5/1996	PCT				
	99	96/15450	5/1996	PCT				
	100	97/37755	10/1997	PCT				
	101	97/27324	7/1997	PCT				

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U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
	102	5,143,853	9/1992	Walt	436	501	
	103	5,244,636	9/1993	Walt et al.	422	82.07	
	104	5,603,351	2/1997	Cherukuri et al.	137	597	
	105	5,755,942	5/1998	Zanzucchi et al.	204	454	
	106	5,681,484	10/1997	Zanzucchi et al.	216	2	

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS		PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation Yes	Translation No

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	APPLICANT KAYYEM, J.	
	FILING DATE April 21, 1999	GROUP ~~1744~~ 1743

		OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
	107	Alleman, K.S., et al., "Electrochemical Rectification at a Monolayer-Modified Electrode," *J. Phys. Chem.*, 100:17050-17058 (1996).*
	108	Arkin et al. "Evidence for Photoelectron Transfer Through DNA Intercalation," *J. Inorganic Biochem. Abstracts*, 6th International Conference on Bioinorganic Chemistry, 51(1) & (2):526 (1993).*
	109	Barisci et al., "Conducting Polymer Sensors," *TRIP*, 4(9):307-311 (1996).*
	110	Baum, R. M., "Views on Biological, Long-Range Electron Transfer Stir Debate," *C&EN*, pp 20-23 (1993).*
	111	Bechtold, R., et al., "Ruthenium-Modified Horse Heart Cytochrome *c*: Effect of pH and Ligation on the Rate of Intramolecular Electron Transfer between Ruthenium(II) and Heme(III)," *J. Phys. Chem.*, 90(16):3800-3804 (1986).*
	112	Bidan, "Electroconducting conjugated polymers: new sensitive matrices to build up chemical or electrochemical sensors. A Review.," *Sensors and Actuators*, B6:45-56 (1992).*
	113	Biotechnology and Genetics: Genetic Screening Integrated Circuit," *The Economist* (February 25-March 3, 1995).
	114	Boguslavsky, L. et al., "Applications of redox polymers in biosensors," *Solid State Ionics*, 60:189-197 (1993).*
	115	Bowler, B. E., et al., "Long-Range Electron Transfer in Donor (Spacer) Acceptor Molecules and Proteins," *Progress in Inorganic Chemistry: Bioinorganic Chemistry*, 38:259-322 (1990).*
	116	Brun, A. M., et al., "Photochemistry of Intercalated Quaternary Diazaaromatic Salts," *J. Am. Chem. Soc.*, 113:8153-8159 (1991).*
	117	Bumm, et al., "Are Single Molecular Wires Conducting?," *Science* 271:1705-1707 (1996).*
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	119	Chang, I-Jy, et al., "High-Driving-Force Electron Transfer in Metalloproteins: Intramolecular Oxidation of Ferrocytochrome *c* by Ru(2,2'-bpy)$_2$(im)(His-33)$^{3+}$," *J. Am. Chem. Soc.*, 113:7056-7057 (1991).*
	120	Chidsey, C.E.D., et al., "Free Energy and Temperature Dependence of Electron Transfer at the Metal Electrolyte Interface," *Science*, 251:919-923 (1991).*
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	122	Chrisey, et al., "Covalent attachment of synthetic DNA to self-assembled monolayer films," *Nucleic Acids Research*, 24(15):3031-3039 (1996).*
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	125	Davis, L. M., et al., "Electron Donor Properties of the Antitumour Drug Amsacrine as Studied by Fluorescence Quenching of DNA-Bound Ethidium," *Chem.-Biol. Interactions*, 62:45-58 (1987).*
	126	Davis, L. M., et al., "Elements of biosensor construction," *Enzyme Microb. Technol.* 17:1030-1035 (1995).
	127	Degani et al., "Direct Electrical Communication between Chemically Modified Enzymes and Metal Electrodes. 2. Methods for Bonding Electron-Transfer Relays to Glucose Oxidase and D-Amino-Acid Oxidase," *J. Am. Chem. Soc.* 110:2615-2620 (1988).*
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	134	Elias, H., et al., "Electron-Transfer Kinetics of Zn-Substituted Cytochrome *c* and Its $Ru(NH_3)_5$(Histidine-33) Derivative," *J. Am. Chem. Soc.*, 110:429-434 (1988).*
	135	Farver, O., et al., "Long-range intramolecular electron transfer in azurins," *Proc. Natl. Acad. Sci. USA*, 86:6968-6972 (1989).*
	136	Fox, L. S., et al., "Gaussian Free-Energy Dependence of Electron-Transfer Rates in Iridium Complexes," *Science*, 247:1069-1071 (1990).*
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	142	Gregg, B. A., et al., "Cross-linked redox gels containing glucose oxidase for amperometric biosensor applications," *Anal. Chem.*, 62:258-263 (1990).*
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		OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
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	147	Heller, A., "Electrical Wiring of Redox Enzymes," *Acc. Chem. Res.*, 23:128-134 (1990).*
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	151	Hsung, et al., "Synthesis and Characterization of Unsymmetric Ferrocene-Terminated Phenylethynyl Oligomers," *Organometallics,* 14:4808-4815 (1995).*
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	155	Kelley, S.O. and J.K. Barton, "Electrochemistry of Methylene Blue Bound to a DNA-Modified Electrode," *Bioconjugate Chem.*, 8:31-37 (1997).*
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	157	Laviron, E., "A.C. Polarography and Faradaic Impedance of Strongly Adsorbed Electroactive Species. Part I: Theoretical and Experimental Study of a Quasi-Reversible Reaction in the Case of a Langmuir Isotherm," *J. Electroanal. Chem.*, 97:135-149 (1979).*
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